

those, two had purchased it. Interestingly, four out of six evolutionary biologists (working with insects) that I asked were aware of the book.

Unfortunately, I cannot in good conscience recommend the purchase of this book to all those interested in insect reproductive behavior. I would suggest looking through a copy if possible to determine whether or not more than one chapter is pertinent to your work and provides you with new perspectives. Let that perusal be your guide to a purchase decision. At US\$95 it is hardly a take-a-chance bargain.—*Gary Dodson, Biology Department, Ball State University, Muncie, Indiana 47306.*

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**A Field Guide to Eastern Butterflies.**—P. A. Opler and V. Malikul. 1992. The Peterson Field Guide Series. Houghton Mifflin Company, Boston, New York, London. xiii + 396 pp., 48 color plates. \$16.95.

As would be expected of a new “Peterson Field Guide,” particularly this one as successor to A. B. Klots’ classic “Guide” of the 1950’s (Klots, 1951), this new book must fill the role of “be all and end all” concerning butterflies in the eastern United States. To its great credit, it generally succeeds.

A reviewer is, of course, asked to assess “pluses and minuses.” Regarding these, I have had a chance not only to gather my own impressions over the last months, but also to listen to numerous other lepidopterists who have used the new field guide since it appeared.

Opler and Malikul’s text closely follows Opler’s previous work with Krizek on eastern butterflies (Opler and Krizek, 1984), which won considerable popular and professional acclaim. Taking off westward from the Opler and Krizek text, however, the new “Peterson Guide” includes treatments for many additional species whose distributions either overlap, or abut, the authors’ arbitrary “eastern” border (the 100th geographic meridian). Most of the book’s comparatively few problems result from inconsistencies or omissions in this latter effort. The book also appears to be the first popular guide to use the new standardized “common names” for North American butterflies (Miller, 1991).

Overall book format follows the standard for Peterson Guides, departing mostly from Klots’ by the addition of (1) distribution maps and (2) thirteen color plates showing butterflies in nature. The latter, so-called “natural pose” photos have been the rage in recent years, but are of questionable value for diagnostic purposes. Fortunately (and in contrast to some other recent field guides), Opler and Malikul do not rely exclusively on these field-photos for butterfly identification. Rather, Malikul has skillfully executed thirty-five color plates in the “diagnostic” painting style employed by other Peterson Guides—concise renderings with pointer arrows noting outstanding features. These illustrations are excellent and, in contrast to Klots’, not simply limited to the “higher” butterflies. Full color plates are also included for the dingier-looking skipper butterflies, and these add greatly to the usefulness of the

book. The only negative comment I have heard from some workers concerning the color plates is that a few appear to exaggerate the angle of the forewing apex.

One valid complaint about the format concerns the distributions maps, some of which are figured with state/province boundaries and some without: 392 *with* (including some smaller regional maps), 57 *without* (these being of North America and all within the "higher" butterflies sections). I have published considerably on butterflies of the central United States and must admit that, even armed with good distributional knowledge, it is hard to discern the actual ranges of butterflies for which no state boundaries are shown (some examples, Baird's Swallowtail, p. 50; Anise Swallowtail, p. 51; Large Marble, p. 70; Mustard White, p. 66; etc.). This matter is not without import; workers in the central United States will be interested in range extensions, new records, and so on. However, wherever there is a map with no state boundaries shown, but a long, straight or meandering, shading crossing the middle United States, it is very difficult to discern what local areas are included.

Generic usages in the book mostly follow the binominal combinations employed earlier by Opler and Krizek. Where different, Opler and Malikul have done a commendable job in tailoring generic nomenclature to recent systematic literature (many field guides opt for old usages more familiar to collectors). In instances where there is controversy among specialists about the status of certain genera or species, the authors appear to have made their choices with some consultation of the literature. Thus, with taxa like Joan's Swallowtail (p. 49 [vindicated more recently by DNA sequencing results, *Lepidopterist News* 1992]), the authors are in a position to appear correct in hindsight when questions go beyond those of simple allopatry (as in the ongoing controversy concerning widely disjunct members of *Boloria*). Opler and Malikul are also to be complimented on their treatment of numerous groups in the Lycaenidae as separate genera. This is also generally consistent with recent literature and is a first among the several more recently published popular guides. Previously, numerous binominal combinations (in genera like *Strymon* Hübner, *Electrostrymon* Clench, *Ministrymon* Clench, etc.) have been confused either by uncertain affinities or tendencies to cluster based on the North American fauna alone. It is likely, however, that some generic usages in the book will soon be obsolete (I am aware, in particular, of *Hemiargus* and *Incisalia* in the Lycaenidae) with the publication of new taxonomic assessments extending beyond the Nearctic.

Opler and Malikul's field guide also has left certain species out. Omissions appear in some cases to be either inadvertent or arbitrary. For instance, the Colorado White (*Pieris sisymbrii* W. Edwards), a butterfly distributed much like many of the other western species treated in the text (e.g., occurring across the western Dakotas and into central Nebraska) is not included by the authors although the Large Marble, a butterfly much harder to find on the western Great Plains, appears in the pierid treatment. This could be an oversight; published records for the above species occur mostly in regional literature concerning Nebraska not cited in the authors' References section. In other cases, omissions appear to result from taxonomic choices. For example, Opler and Malikul treat [rightly it appears, given the systematic literature] the Canadian Tiger Swallowtail and Tiger Swallowtail as separate species with an intervening hybrid zone. However, in a classically similar situation in the hairstreak butterflies, the "western" and "eastern" Olive Hairstreaks, the eastern and western segregates are considered the same species but only the eastern entity's distribution

is illustrated. If indeed these are the same species, the distribution map should show all of western to central Nebraska, South Dakota and North Dakota where the "western" Olive Hairstreak is well known. Some of these inconsistencies may have resulted from the authors not being able to revise distribution maps after final work on their text. It is traditional in the preparation of popular guides that "marginal" taxa are treated last and in a hurry.

In summary, there are many good things one can say about this book—it is well-prepared; it is cheap; it is quite complete; you can put it in your pocket; you won't miss many taxa if you don't go too far west. The authors can be proud of their efforts on this work—most lepidopterists will be very happy to have it.—*Kurt Johnson, Department of Entomology, American Museum of Natural History, Central Park West at 79th St., New York, New York 10024.*

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